

A SWITCHED INTERCONNECTION NETWORK
WITH INCREASED BANDWIDTH AND PORT COUNT

ABSTRACT OF THE DISCLOSURE

A network is disclosed for interconnecting devices external to the network.

- 5 Embodiments of the network include a plurality of switching nodes interconnected by links forming or capable of forming a Gamma graph interconnection network. Devices are coupled to the network via a plurality of ports. Furthermore, the network includes a plurality of Infiniband buses with each switching node coupled to at least one of the buses. Each Infiniband bus is capable of supporting a configurable number of ports such
- 10 that the bandwidth of a port is inversely proportional to the number of ports configured per bus. The Gamma graph interconnection network of the router providing for high port counts and increased bandwidth availability. Furthermore, the use of industry standard buses, such as Infiniband buses, allow for the interconnection of multiple heterogeneous application specific modules to interface and communicate with one
- 15 another.